



US007052544B2

**(12) United States Patent  
Langford****(10) Patent No.: US 7,052,544 B2****(45) Date of Patent: May 30, 2006****(54) LOW DUST WALL REPAIR COMPOUND****(75) Inventor: Nathaniel P. Langford**, Somerset, WI (US)**(73) Assignee: 3M Innovative Properties Company**, St. Paul, MN (US)**(\*) Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.**(21) Appl. No.: 11/029,759****(22) Filed: Jan. 5, 2005****(65) Prior Publication Data**

US 2005/0119388 A1 Jun. 2, 2005

**Related U.S. Application Data****(60)** Division of application No. 10/788,053, filed on Feb. 26, 2004, now Pat. No. 6,863,723, which is a division of application No. 09/821,392, filed on Mar. 29, 2001, now Pat. No. 6,733,581, which is a continuation-in-part of application No. 09/208,782, filed on Dec. 10, 1998, now Pat. No. 6,358,309.**(51) Int. Cl.****C04B 111/72** (2006.01)**C04B 26/02** (2006.01)**C04B 26/04** (2006.01)**C04B 28/14** (2006.01)**C04B 103/00** (2006.01)**(52) U.S. Cl.** ..... **106/778; 106/270; 106/272; 106/660; 106/780; 106/802; 106/804; 106/817; 106/822; 524/8; 524/423; 524/425****(58) Field of Classification Search** ..... **106/778, 106/270, 272, 660, 780, 802, 804, 817, 822; 524/8, 423, 425**

See application file for complete search history.

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A wall repair compound useful for filling and repairing cracks, holes, and other imperfections in a wall surface includes a conventional filler material, a conventional binder material, and a dust reducing additive which reduces the quantity of airborne dust particles generated when sanding the hardened joint compound. Airborne dust reducing additives include oils, surfactants, solvents, waxes, and other petroleum derivatives. The additive can be added to conventional ready-mixed joint compounds and to setting type joint compounds. A method of reducing the quantity of airborne dust generated when sanding a fully hardened joint compound includes mixing a sufficient quantity of the dust reducing additive with the joint compound prior to when the joint compound has been applied to the wall.